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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/808,282	03/14/2001	Christopher Poli	GIC-629	3118

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EXAMINER	
SALCE, JASON P	

ART UNIT	PAPER NUMBER
2611	

DATE MAILED: 12/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/808,282	POLI ET AL.	
	Examiner	Art Unit	
	Jason P Salce	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 March 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 March 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *6/11/2001*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 6/11/2001 was filed after the filing date of the instant application on 3/14/2001. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the examiner is considering the information disclosure statement.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3-4, 11, 13, 17-18, 24 and 26-27 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Bacon et al. (U.S. Patent No. 5,440,632).

Referring to claim 1, Bacon discloses a message source (headend 10 in Figure 1) for generating control information (providing operating system code at Column 11, Lines 1-3) adapted to provide different functionality to different broadband communication terminals (see Column 10, Lines 58-66 for providing different operating system version to different terminals and Column 11, Lines 18-20 for different operating systems providing a particular purpose (different functionality)). For clarification purposes, Applicant states a "message source" in claim 1, which not only generates control information (which applicant describes to be code and data objects) provided by the headend 102 (see Figure 1 and Page 8, Lines 24-27), but also provides control

channel configuration messages from message source 101 (see Figure 1 and Page 9, Lines 1-3). Therefore, the applicant is stating that the message source 101 and headend 102 represents the "message source" recited in claim 1, which is supported by the specification on Page 9, Lines 7-8 (which states that messages can be sent from the headend 102 directly instead of the message source 101). Therefore, the "message source" in claim 1 (headend 102) is capable of "generating control information" (the operating system) and "provides control channel configuration messages" (telling the terminal where to download the operating system). The examiner also notes that the interpretation of "generating control information" is consistent with applicants, where generating is simply providing the control information from the headend to a terminal (see Page 8, Lines 24-27) as opposed to specifically creating the control information.

Bacon also discloses at least one transmitter adapted to transmit control information generated by said message source to said terminals on different control channels (see Column 11, Lines 1-3 for broadcasting (transmitting the software program) to the terminal and Column 9, Lines 66-68 for a message indicating which frequency of the channel which the downloadable program code information will be transmitted and Column 5, Lines 24-25 and 44-45 for providing additional data in either the in-band or out-of-band channel).

Bacon also discloses that the message source provides control channel configuration messages targeted to different terminals (see Figures 3A-3C and Column 9, Lines 25-30 for the channel configuration messages sent to subscribers (see Column 9, Lines 35-37)).

Bacon also discloses that the control channel configuration messages designate a particular control channel from which the targeted terminal should thereafter acquire the control information required to control the functionality of the respective terminal (see Column 9, Lines 66-68 for which channel the program code should be downloaded from).

Bacon also discloses that the transmitter provides the control information to the respective terminal on the designated control channel for use (see Column 11, Lines 1-3 for transmitting the program code from the headend and Column 9, Lines 66-68 for the control channel designation in the message) until the terminal is directed to download an updated revision of program code by a new control channel configuration message (see Column 10, Lines 58-65 for further downloading an updated revision to the program code, therefore allowing a terminal to be directed to receive another control channel configuration message described at Column 9, Lines 25-30, which would contain bytes 16 and 17 to instruct the terminal which channel the program code must be received). Also note Column 11, Lines 9-11 for providing the code revisions by another control channel configuration message (global download parameters transaction) and Column 9, Lines 66-68 for directing either an individual terminal or a group of terminals to a channel on which the program code can be downloaded (also see claim 1 of Bacon for describing that the control message directs a terminal to one of a plurality of channels), therefore in order to update program code that had been previously downloaded to a subscriber's terminal, the terminal must receive another control channel configuration message, which can direct a terminal to a specific channel

to tune to receive program code data, which can be inserted into a plurality of channels (see Column 5, Lines 22-58)).

Referring to claim 3, Bacon discloses that control information includes updated code objects (see Column 9, Lines 25-28 for downloading new program code).

Referring to claim 4, the Applicant states that a product test is performed on at least one particular terminal by providing a terminal with a control channel configuration message designating a test channel from which the terminal should acquire control information. Therefore, a product test is simply a downloading of new software (also see Page 10, Lines 19-27 of Applicant's specification for further support of the examiner's interpretation of a product test). Therefore, this limitation is taught by Bacon in the rejection of claim 1, specifically Column 9, Lines 25-31 for downloading new program code and Column 9, Lines 66-67 for receiving a message instructing which control channel to download the new program code from.

Referring to claim 11, Bacon discloses that different terminals use different communication protocols (see Column 5, Lines 22-25 for receiving data using in-band signaling and Column 5, Lines 44-45 for receiving data using out-of-band signaling), and are directed by respective control channel configuration message to different control channels (see Column 9, Lines 66-68 for directing a terminal to a specific control channel using a control channel configuration message) depending on the particular communication protocol used (the examiner notes that since an in-band and out-of-band channel reside at different frequencies, then if data is sent in the in-band channel,

then it is directed to a specific control channel based on the in-band communication protocol used (and also for an out-of-channel channel)).

Referring to claims 13, Bacon discloses that some of the control channels are out-of-band channels (see Column 5, Lines 44-58 for additionally providing data in the television programming using out-of-band signaling).

Referring to claim 17, see the rejection of claim 1.

Referring to claim 18, see the rejection of claim 4.

Referring to claim 24, see the rejection of claim 1 and note that Bacon discloses a tuner 100 in Figure 1 and at Column 6, Lines 18-20, which is used to change the channel to a frequency specified by the header information disclosed at Column 9, Lines 66-68. Bacon also discloses a processor, which is used to control all the functions within the set-top box at Column 7, Lines 51-52 and responsive to control information at Column 8, Lines 30-34.

Referring to claim 26, see the rejection of claim 3.

Referring to claim 27, Bacon discloses that the terminal is a subscription television terminal (see Column 4, Lines 60-63).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 2, 5-6, 14, 19-20 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bacon et al. (U.S. Patent No. 5,440,632) in view of Bahraini (U.S. Patent Application Publication 2002/0116706).

Referring to claim 2, Bacon discloses all of the limitations in claim 1, as well as the control channel configuration message designating a control channel frequency (see Column 9, Lines 66-67 for a message containing a designation of a control channel frequency), but fails to teach that the control channel configuration message designates a control channel packet identifier (PID).

Bahraini discloses that a download control message (control channel configuration message) designates a download PID used to identify the incoming data on a specific control channel (see Paragraphs 0011 and 0012 along with Table 1).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the control channel configuration messages, as taught by Bacon, to include the control channel packet identifier, as taught by Bahraini, for the purpose of identifying packets including information for directing the STB to channels where the desired software or code object to be downloaded is located (see Paragraph 0011 of Bahraini).

Referring to claim 5, Bacon discloses performing a product test using a test channel (see the rejection of claim 4), but fails to teach that the test channel is used to test features of the at least one terminal. The examiner notes that the Applicant's only support in the specification for testing features using the test channel is disclosed on Page 5, Lines 21-22, which simply state the claim limitations verbatim. Therefore, the

examiner notes that the interpretation of testing the features of a terminal is performing a test of a properly downloaded operating system.

Therefore, Bahraini discloses that once a program is downloaded from the designated control channel configuration message a test is performed to determine if the program code was downloaded successfully and can be properly be run (see Paragraph 0019), therefore testing the feature of an executable operating system.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the control channel messaging system, as taught by Bacon, to include the program feature test, as taught by Bahraini, for the purpose of testing the integrity of the downloaded object (see Paragraph 0019).

Referring to claim 6, see the rejection of claim 5.

Referring to claim 14, Bacon discloses that some of the control channels can be provided by an out-of-band channeling scheme (see Column 5, Lines 44-45), but fails to teach that all of the control channels are out-of-band channels.

Bahraini discloses that control channels can be provided on either out-of-band or in-band channels (see Paragraph 0008). Bahraini further discloses that if an out-of-band channel is unable to be found for the particular control channel data, then an in-band channel may be used if the information needed to tune to the in-band channel exists (see Paragraph 0010, Lines 1-4). Therefore, if the system does not try to tune to an in-band channel and the error message is produced (see Paragraph 0010), then only out-of-band channels are used for all control channels.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the control channels, as taught by Bacon, with the use of only out-of-band channels, as taught by Bahraini, for the purpose of eliminating hardware at the receiver (such as the in-band tuner 129 in Figure 2 of Bacon) resulting in a more cost effective receiver for the viewer.

Referring to claims 19-20, see the rejection of claims 5-6, respectively.

Referring to claim 25, see the rejection of claim 2.

4. Claims 7-9, 21-23 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bacon et al. (U.S. Patent No. 5,440,632) in view of Dufresne et al. (U.S. Patent No. 5,630,920).

Referring to claim 7, Bacon discloses that a plurality of terminals can be grouped (see Column 9, Lines 35-37 and Column 10, Lines 54-58 for addressing messages to a group of subscribers) and the group can be directed by a respective control channel configuration message to a different control channel (see Column 9, Lines 66-68 for specifying the frequency of the channel the program code will be transmitted) for providing customized functionality for the terminals in the group (see Column 9, Lines 25-31 for providing new program code, which would provide new functionality to the terminals in the group).

Bacon fails to disclose that the terminals are grouped by predetermined criteria. Dufresne discloses that a packet of data is sent to an address which designate the service address for a subscriber station and codes which may be common with many

other subscribers which the same kinds of classes of service are provided (see Column 9, Lines 16-22) and that data packets can be sent to a group of subscribers according to a service address (see Column 8, Lines 40-44). Therefore, the type of service is the predetermined criteria.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the addressing scheme, as taught by Bacon, using the service addressing scheme, as taught by Dufresne, for the purpose of providing doctors or other professionals with television educational channels which are prohibited to other subscribers (see Column 18, Lines 56-59 of Dufresne).

Claim 8 corresponds to claim 7, where Dufresne further teaches that the terminals receive services from subscription television systems (see Column 4, Lines 46-56 for receiving services subscribed to by a subscriber), and the predetermined criteria comprises the particular system to which the terminals are subscribed (see Column 5, Lines 19-25 for the predetermined criteria consisting of a pay-TV service subscribed to by the subscriber).

Claim 9 corresponds to claim 8, where the services comprise television services (see again Column 5, Lines 19-25).

Referring to claims 21-23, see the rejection of claims 7-9, respectively.

Referring to claim 28, see the rejection of claim 9.

5. Claims 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bacon et al. (U.S. Patent No. 5,440,632) in view of MacInnis et al. (U.S. Patent No. 6,487,723).

Referring to claim 10, Bacon discloses a subscriber terminal having different operating system (see Column 10, Lines 54-63 and Column 2, Lines 19-51 for downloading a specific operating system for a subscriber terminal) that can be downloaded on a particular control channel designated by a control message (see Column 9, Lines 25-31 for downloading the new program code to the subscriber terminal and Column 9, Lines 66-68 for receiving a message designating which channel the program code will be transmitted on). Also note Column 11, Lines 1-16 for different terminals receiving different types of software (kernel revisions). Also note that the program code downloaded to each subscriber terminal controls various aspects of the subscriber's terminal (see Column 2, Lines 29-33 for downloading new "boot code"), therefore the program code downloaded ("boot code") represents an operating system.

However, Bacon fails to disclose being directed to a different control channels depending on the particular operating system being run by the subscriber terminal.

MacInnis discloses directing a viewer (via table T in Figure 3 (the control channel configuration message)) to download specific software at a specific location (see Column 5, Lines 16-21 for directing the user to which channel the software can be downloaded from) based on the operating system version the viewer is running at his/her subscriber terminal (see Column 5, Lines 28-48 for downloading a specific version of software according to which operating system is being run).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the control channel configuration message, taught by Bacon, using the location information and the operating system version information, as taught by MacInnis, for the purpose of allowing the terminal to select the "best" module version for that terminal (see Column 2, Lines 41-43 of MacInnis).

Referring to claim 12, Bacon discloses that newer terminals can be added to the system (see Column 11, Lines 6-8), but fails to teach that the newer terminals are directed by a respective control channel configuration message to a different control channel than a population of older terminals.

MacInnis discloses that a terminal with a newer operating system version and hardware model (see Column 5, Lines 42-48) is directed to a location (channel) (see location 420 in Figure 3 for the Mortal Combat module configured for the newer terminal) for downloading the module, while a terminal with an older operating system version and hardware model (see Column 5, Lines 26-41) is directed to a location (channel) different from the location (channel) supplying the updated version of the game for the newer terminal (see location 127 in Figure 3 for an older terminal receiving an older version of Mortal Combat).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the control channel configuration message, taught by Bacon, using the location information, operating system version information and hardware model information, as taught by MacInnis, for the purpose of allowing the

terminal to select the "best" module version for that terminal (see Column 2, Lines 41-43 of MacInnis).

6. Claims 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bacon et al. (U.S. Patent No. 5,440,632) in view of Bahraini et al. (U.S. Patent Application Publication 2002/0108120).

Referring to claim 15, Bacon discloses communicating control channel configuration messages via local controllers (see Column 5, Lines 34-38 for sending control channel configuration messages (see Column 9, Lines 66-68) from a headend 22 (local controller) to terminals 40, 44 and 48 in Figure 1).

Bacon fails to disclose a wide-area access controller that communications said control channel configuration messages to said terminals via local access controllers.

Bahraini discloses a message source comprises a wide-area access controller (DAC 112 in Figure 1) that communicates said control channel configuration message (see Paragraphs 0022, 0023 and 0024) to said terminals (ASTBs 106 in Figure 1) via local controllers (cable plants 1 and 2 in Figure 1).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the messaging system, as taught by Bacon, using the additional wide area messaging controller (DAC in Figure 1), for the purpose of optimizing transmissions between the set-top terminals and other logical components of the cable system (see Page 1, Paragraph 0004 of Bahraini).

Claim 16 corresponds to claim 15, where Bahraini further discloses that the wide-area access controller comprises a cable television regional access system (see Paragraph 0013 on Page 1 for a cable system 100, which includes a digital access controller 112 in Figure 1). The examiner notes that since the digital access controller 112 is part of a cable system, and send data to set-top boxes, then the digital access controller 112 is a cable television access system. The examiner further notes that two cable plants supply messages from the digital access controller to two separate regions of set-top boxes, therefore the cable television access system (digital access controller 112) is also a regional system.

Bahraini also discloses that the local controllers comprise cable television headends (see Cable Plant #1 (regional headend) for receiving messages from DAC (central headend) and routing these messages to ASTBs 106 in Figure 1). The examiner notes that since the Cable Plant #1 communicates with ASTB 106 in Figure 1, then the Cable Plants #1 and #2 are headends.

Bahraini also discloses that the terminals comprise cable television terminals (see ASTBs 106 in Figure 1 in cable system 100 (see Paragraph 0013 on Page 1)). The examiner notes that a set-top box is defined by the Microsoft Computer Dictionary as, "A device that converts a cable TV signal to an input signal to the TV set". Therefore, the ASTBs 106 in Figure 1 are cable television terminals.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason P Salce whose telephone number is (703) 305-

1824. The examiner can normally be reached on M-Th 8am-6pm (every other Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Grant can be reached on (703) 305-4755. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

November 15, 2001